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<u>LISTING OF THE CLAIMS</u>:

This listing of claims will replace all prior versions, and listings, of claims in the Application:

1.   (Original) A method of performance monitoring (PM) in a passive optical network that includes at least one optical line terminator (OLT) and at least one optical network terminal (ONT), the method comprising the steps of:

setting a PM initialization time at the ONT;

maintaining a base PM time at the ONT;

zeroing an interval end time counter at the ONT; and

collecting first PM data in one of a plurality of PM bins for a PM time interval.

2.   (Original) The method according to claim 1, wherein the PM initialization time is set by the OLT to a system time.

3.   (Original) The method according to claim 2, wherein the system time is set during at least one of an ONT ranging and an ONT PM counter initialization.

4.   (Original) The method according to claim 1, wherein the base PM time is a most recent PM interval start time with respect to the PM initialization time of the ONT.

5.   (Original) The method according to claim 1, wherein the interval end time counter increments upon completion of collecting the first PM data for the PM time interval.

6.   (Original) The method according to claim 5, wherein the interval end time counter is a cyclic counter.

7.   (Original) The method according to claim 1, wherein the plurality of PM bins equals 32 PM bins.

8.   (Original) The method according to claim 7, wherein the PM time interval is 15 minutes.

9.   (Original) The method according to claim 1, further comprising the steps of:

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incrementing the interval end time counter upon completion of collecting the first PM

data for the PM time interval; and

collecting more PM data in another of the plurality of PM bins for the PM time interval.

10. (Original) The method according to claim 9, wherein the interval end time counter is a cyclic counter.

11. (Original) The method according to claim 9, wherein the plurality of PM bins equals 32 PM bins.

12. (Original) The method according to claim 11, wherein the PM time interval is 15 minutes.

13. (Original) The method according to claim 9, further comprising the step of, after the step of collecting more PM data, repeating the steps of incrementing and collecting more.

14. (Original) The method according to claim 13, wherein the interval end time counter is a cyclic counter.

15. (Original) The method according to claim 13, wherein the plurality of PM bins equals 32 PM bins.

16. (Original) The method according to claim 15, wherein the PM time interval is 15 minutes.

17. (Original) The method according to claim 1, further comprising the steps of, after the step of collecting first PM data:

getting the PM initialization time and the base PM time from the ONT at the OLT; and

getting the first PM data from the one of the plurality of PM bins.

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18. (Original) The method according to claim 9, further comprising the steps of, after the step of collecting more PM data:

getting the PM initialization time and the base PM time from the ONT at the OLT;

determining a PM bin offset; and

getting the more PM data from the another of the plurality of PM bins based on the PM bin offset.

19. (Original) The method according to claim 18, wherein determining the PM bin offset includes taking the difference between a system time and the base PM time.

20. (Original) The method according to claim 13, further comprising the steps of, after the step of collecting more PM data:

getting the PM initialization time and the base PM time from the ONT at the OLT;

determining a PM bin offset;

getting the interval end time counter from the ONT at the OLT;

getting the more PM data from the another of the plurality of PM bins based on the interval end time counter.

21. (Original) The method according to claim 20, wherein determining the PM bin offset includes taking the difference between a system time and the base PM time.

22. (Original) The method according to claim 20, wherein the interval end time counter is a cyclic counter.

23. (Original) The method according to claim 22, wherein getting the more PM data includes cycling through the interval end time counter.

24. (Original) A system for performance monitoring (PM) in a passive optical network that includes at least one optical line terminator (OLT) and at least one optical network terminal (ONT), the system comprising the steps of:

means for setting a PM initialization time at the ONT;

means for maintaining a base PM time at the ONT;

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means for zeroing an interval end time counter at the ONT; and

means for collecting first PM data in one of a plurality of PM bins for a PM time interval.

25.   (Original) The system according to claim 24, wherein the PM initialization time is set by the OLT to a system time.

26.   (Original) The system according to claim 25, wherein the system time is set during at least one of an ONT ranging and an ONT PM counter initialization.

27.   (Original) The system according to claim 24, wherein the base PM time is a most recent PM interval start time with respect to the PM initialization time of the ONT.

28.   (Original) The system according to claim 24, wherein the interval end time counter increments upon completion of collecting the first PM data for the PM time interval.

29.   (Original) The system according to claim 28, wherein the interval end time counter is a cyclic counter.

30.   (Original) The system according to claim 24, wherein the plurality of PM bins equals 32 PM bins.

31.   (Original) The system according to claim 30, wherein the PM time interval is 15 minutes.

32.   (Original) The system according to claim 24, further comprising:

means for incrementing the interval end time counter upon completion of collecting the first PM data for the PM time interval; and

means for collecting more PM data in another of the plurality of PM bins for the PM time interval.

33.   (Original) The system according to claim 32, wherein the interval end time counter is a cyclic counter.

34.   (Original) The system according to claim 32, wherein the plurality of PM bins equals 32 PM bins.

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35.   (Original) The system according to claim 34, wherein the PM time interval is 15 minutes.

36.   (Original) The system according to claim 32, further comprising, after the means for collecting more PM data, a means for repeating the steps of incrementing and collecting more.

37.   (Original) The system according to claim 36, wherein the interval end time counter is a cyclic counter.

38.   (Original) The system according to claim 36, wherein the plurality of PM bins equals 32 PM bins.

39.   (Original) The system according to claim 38, wherein the PM time interval is 15 minutes.

40.   (Original) The system according to claim 24, further comprising, after the step of collecting first PM data:

> means for getting the PM initialization time and the base PM time from the ONT at the OLT; and
>
> means for getting the first PM data from the one of the plurality of PM bins.

41.   (Original) The system according to claim 32, further comprising, after the step of collecting more PM data:

> means for getting the PM initialization time and the base PM time from the ONT at the OLT;
>
> means for determining a PM bin offset; and
>
> means for getting the more PM data from the another of the plurality of PM bins based on the PM bin offset.

42.   (Original) The system according to claim 41, wherein determining the PM bin offset includes taking the difference between a system time and the base PM time.

43.   (Original) The system according to claim 36, further comprising, after the step of collecting more PM data:

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means for getting the PM initialization time and the base PM time from the ONT at the
OLT;

means for determining a PM bin offset;

means for getting the interval end time counter from the ONT at the OLT;

means for getting the more PM data from the another of the plurality of PM bins based on
the interval end time counter.

44.   (Original) The system according to claim 43, wherein determining the PM bin ·
offset includes taking the difference between a system time and the base PM time.

45.   (Original) The system according to claim 43, wherein the interval end time
counter is a cyclic counter.

46.   (Original) The system according to claim 45, wherein getting the more PM data
includes cycling through the interval end time counter.

47.   (Original) A passive optical network (PON) that uses a system time for
performance monitoring (PM) of the PON comprising:

at least one optical network terminal (ONT), the ONT including a PM initialization time,
a base PM time, a plurality of PM bins and an interval end time counter; and

at least one optical line terminator (OLT), the OLT including the system time; and
wherein:

the OLT is coupled to the ONT via the PON;

the OLT is configured to set the PM initialization time of the ONT using the
system time; and

the ONT is configured to maintain the base PM time, initialize an interval end
time counter and collect a first set of PM data for a PM time interval in one of
the plurality of PM bins.

48.   (Original) The network according to claim 47, wherein the ONT is further
configured to set the base PM time to a most recent PM interval start time with respect to the PM
initialization time.

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49.   (Original) The network according to claim 47, wherein the ONT is further configured to increment the interval end time counter upon completion of collecting the set of first PM data.

50.   (Original) The network according to claim 49, wherein, after interval end time counter is incremented, the ONT is further configured to collect more sets of PM data in other of the plurality of PM bins for the PM time interval and to increment the interval end time counter upon completion of collecting more sets of first PM data.

51.   (Original) The network according to claim 47, wherein, after the first set of PM data is collected, the OLT is further configured to retrieve the PM initialization time, the base PM time and the first set of PM data from the ONT.

52.   (Original) The network according to claim 50, wherein, after the more sets of PM data are collected, the OLT is further configured to retrieve the PM initialization time, the base PM time and any of the sets of PM data from the ONT.

53.   (Previously Presented) The method according to claim 1, wherein the PM initialization time is set after the ONT has been ranged.

54.   (Previously Presented) The method according to claim 24, wherein the PM initialization time is set after the ONT has been ranged.

55.   (Previously Presented) The method according to claim 47, wherein the PM initialization time is set after the ONT has been ranged.